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ABSTRACT

Difficulties faced by the female graduate are considered. In an attempt to assess institutional discrimination against the female student, the following areas are examined: enrollment of men and women in different fields of study, matriculation and attrition rates, and biographical data. Literature is reviewed that considers the impact of the following variables on the academic and professional careers of women: family structure, faculty and colleague perceptions, lower level tracking, and lack of role models. Among the findings revealed by the literature review are the following: in almost all fields women graduate students are less likely to persist to obtain a doctorate than their male counterparts; women face barriers in admissions procedures and financial aid; the psychological support network in most male-dominated fields is severely curtailed for women; a female student is less likely to be taken under the wing of a professor because of her sex; course scheduling is usually arranged around full-time students, with few considerations for part-time students; and women are excluded from many traditionally masculine fields of study. (SW)

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The Cost for Women in Graduate and Professional Schools:
More Than a Question of Money

by

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Abstract

"Graduate school is a game for which students need to know the rules and in which students must be willing to play" (DeBarone, 1974). Graduate students have been "permitted" to enter an elite society where the requirements are stringent, the work lengthy and tedious, and the social and familial interactions redefined and constrained. This elite society has traditionally been male-dominated, with a "good ole boy" network set up to facilitate male success and somewhat alleviate the emotional strains inherent in graduate school. Given the above conditions, a female enters post-baccalaureate study with numerous obstacles to face. She is pursuing a traditionally non-feminine career, with an underdeveloped support network to cope with academic and social exigencies.

This paper is concerned with the female graduate student, the real and manufactured (i.e., professional socialization) difficulties she faces in graduate school and the relative success of her attempts. We will examine distribution of degrees by field, matriculation and attrition rates, and biographical data in an attempt to begin assessing the institutional discrimination which permits academia to remain male-dominated. From a review of the literature, previous studies have shown that several factors emerge as important variables in the prediction of completion rates for female graduates. Among those determinants are family structure, faculty and colleague perceptions, lower-level tracking, lack of role models and admissions policies. This study will report on all these variables in order to assess their combined impact on the academic and professional careers of women.

Introduction

The year 1634 marked the beginning of formal higher education in the United States with the founding of Harvard. However, formal education for women did not begin until some two hundred (203) years later when Oberlin admitted four women. The reasons for the slow development of higher education for women were varied and rooted in the social thought of the 19th century.

Traditionally females have been confined to a multi-faceted role of wife, mother and housekeeper with few formal concerns outside this realm. The prevailing attitude subscribed to an ideal of a "feminine-domesticated" woman whose sole interest and activity resided within the family. Even those liberal thinkers who allowed for the possibility of a woman with formal education limited it only to a role of enhancing her domestic abilities. For example Mary Lyon, founder of Mount Holyoke, summarized the purpose of that institution: "Oh, how immensely important is the preparation of the daughters of the land to be good mothers" (Watson, 1977:134). Similarly, John Burton, addressing a school for young ladies stated:

To be obedient Daughters, faithful wives and prudent Mothers; to be useful in the affairs of a House, to be sensible Companions and affectionate friends are without doubt, the principal objects of female duty. The accomplishments, therefore, which you should acquire, are those which will contribute to render you serviceable in domestic, and agreeable in social life.

(Feldman, 1974:22)

Besides the limited amount of support for women's education in general, other debates surfaced around the issue of coeducation because of Oberlin's admission of women. Lulu Holmes, in commenting on nineteenth century higher education wrote: "The public was not yet wholly committed to higher education for women under any circumstances, and to admit women to the same courses which men took, into the same classes in which men sat, seemed to present grave dangers" (Watson, 1977:136). In response to these issues women's seminaries and institutions

were established across the country. Until 1850 most of these seminaries and institutions were considered glorified high schools and only after that time were they viewed as competitors to colleges. However, given that women were denied an adequate secondary education these institutions still had to maintain preparatory courses.

With the advent of the Civil War more women were by necessity trained as teachers and hired as faculty in secondary schools. These female role models precipitated the entrance of more women into post secondary education. For instance, in 1870 women were 20 percent of the undergraduate enrollment and in 1880 the proportion rose to 32 percent (Graham, 1978). With these increases in undergraduate enrollment females slowly filtered into graduate schools so that by the years 1888-1890, 271 women made up 13.2 percent of the graduate students. In the years 1898-1899 this figure increased to 1021, or 26.8 percent of the graduate population.

In the early 1900's women achieved their highest proportion within the undergraduate, graduate and faculty populations. In the years 1919-1920, women were 47 percent of the undergraduate students which neared their proportion within the general population (Graham, 1978). By 1900 women had earned 9 percent of the doctorates and this figure increased to 11 percent by 1910 and 18 percent by 1920 (Feldman, 1974). The proportion of female faculty, although continually rising, did not approach the percentages for students. One reason for this growth was that early twentieth century female virtues were at odds with a professional career. The psychological factors inherent in a college decision were different in graduate school because it was viewed as a prelude to a professional career. Completion of graduate school soured society's perceptions of the woman and her self perceptions. An alternative to this fate was marriage before completion of the degree. However, between 1875-1924, 75 percent of the women doctorates were spinsters.

At the close of the 1930's women were 15 percent of the doctorate recipients and 32.5 percent of college presidents, instructors and professors. However, these percentages were drastically decreasing with the resurgence of conservative attitudes toward female education and their role in general. Women within the decades of the 1940's and 1950's readopted the 19th century values of femininity, acquiescence and domesticity. The major concern was to find a husband and have children. The concern with involvement in the educational and occupational structure was complicated. Graduate school represented a tremendous burden on the family life of women and was abandoned. This trend persisted into the late 1960's when many women began to question these values and the resultant self-imposed restrictions. Since the early 1970's the numbers of women in graduate school has increased steadily. Although their values are still fraught with ambiguity, educated women are moving toward better representation within the educational and occupational structure.

This paper is concerned with the barriers women face in attempting to sustain their drive toward population parity in graduate and professional education. The resistance of society to women's education is still prevalent; it is only the guise of discrimination which has changed from a blatant refusal to veiled and forceful discouragement.

(Table I shows the five year trends of doctorate production in the United States from 1920 to 1970 by gender.)

Distribution by Fields

In the United States, women enter professions such as nursing and teaching where they can best apply the 'feminine' characteristics of 'expressiveness and people-orientation', and they do not enter professions such as law or engineering which require 'masculine' characteristics such as 'coolness, detachment, analytic objectivity or object orientation'."

(Epstein, 1970:155)

Traditionally females have been directed into fields which possess a static and conservative subject matter. Research in the area of sex-typed disciplines has supported the notion of distinctly masculine and feminine fields, which functions similarly to prescriptions for women's education handed down in the 19th century. Reisman (1964) suggested that fields such as political science, which stress power relationships, attract few females. On the other hand, fields such as anthropology, which emphasize family kinship structure, draw more women. Feldman (1974) administered a survey to 352 undergraduate students (at San Francisco State University, University of California, Berkeley, University of Arizona, Southern Methodist University and University of Wisconsin) in which they rated forty-five academic disciplines using a seven point semantic-differential scale on the polar types -- masculine and feminine. His results indicated that engineering was perceived as the most masculine discipline, while home economics and nursing were seen as the most feminine disciplines. Within the traditional professions law was regarded as more masculine than medicine. Feldman further found that the stereotypical imagery of the fields was related to enrollment. For example, women were heavily concentrated in the traditional feminine areas. A causal link cannot be determined in this instance because of its approximation to the "chicken or the egg" dilemma. That is, did women respond to stereotypes and concentrate in accepted fields or did the over-concentration of women in certain fields cause the stereotypes to be formed?

An unfortunate condition of women being concentrated in a few fields is that these same fields are regarded as low prestige and simultaneously accrue low economic regards. To illustrate power within academic relationships, Feldman (1974) considered consultantships. He found that in almost every area women were less likely to serve in this capacity than men. Even in female dominated disciplines such as home economics more men acted as consultants than women. This is akin to the position of university administrator, given that an administrator

occupies one of the most powerful positions within the university system. Women are also grossly underrepresented in this area.

In terms of graduate and professional school enrollment, women were 35 percent of the total graduate school population in 1969, as compared with 38 percent in 1972 and 43.8 percent in 1976. These percentages indicate a definite increase in enrollment. However, an examination of selected fields supports Feldman's results indicating concentrations in "feminine" fields. (See Table 2) For instance in the following fields designated as "feminine", women show high percentages in 1976: education, 64.5 percent; foreign languages, 65.4 percent; health professions (other than medicine), 64.4 percent; english language and literature, 54.8 percent and library science, 79.9 percent. On the other hand, in the following fields designated as "masculine" women still show unusually low numbers: agriculture, 17 percent; business and commerce, 18.6 percent; computer science and systems analysis, 18.4 percent; law, 15.4 percent and physical sciences, 15.7 percent. Even though these statistics exhibit an overall increase in enrollment for women, there is not a parallel increase in degrees awarded. This is due in part to a variety of factors which result in high attrition rates for women.

Attrition

Attrition of women in greater proportion than men at each rung of the academic ladder is the symptom of discriminatory policies and behavior within academe. The causes of this attrition include: overdiscriminatory acts, an absence of faculty role models, limited flexibility in administrative policies, a lack of support facilities for non-traditional students and social pressures from outside the university.

(Committee to Study the Status of Women in Graduate Study and Later Careers, 1974:vi)

Sells (1973) cites a national study of 1950-1953 postmaster's students in the arts and sciences which revealed that 65 percent of the male students and

45 percent of the female students had completed the doctorate in nine to twelve years. A similar pattern emerged in a study of Woodrow Wilson fellows who enrolled in post-baccalaureate school between 1950 and 1963. It was found that 44 percent of the men and 64 percent of the women did not earn the doctorate six to eight years after entrance. A study on an entering cohort of 1962 doctoral students at Berkeley showed that by the fourth year of graduate school 22 percent of the men and 42 percent of the women had dropped out.

The attrition percentages for women are even more startling when one compares graduates at several educational levels. For instance, a Carnegie Commission Study (1970) reports that in 1970 women were 50.4 percent of the high school graduates, 41.3 percent of college graduates and 36.5 percent of both master's and doctorate recipients. This clearly indicates that the higher the academic level the fewer the women to be found.

In almost all fields women graduates are less likely to persist in graduate school to get a doctorate than their male counterparts. Several factors contribute to the high attrition rate of women beyond the baccalaureate degree. Societal norms allow males several options after a college education commensurate with gender prescriptions. However, women face societal barriers which may prevent them from seeking admission to an advanced degree program. Alder (1976) cites several studies which suggests reasons why women fail to apply to graduate school. An absence of role models, differential parental expectations and aspirations for daughters and sons, little or no encouragement from counselors and faculty, conflicting sex and professional role expectations and "fear of success" compose a matrix of obstacles which cause women to settle for non-professional careers.

Given that a female opts, despite societal norms, to pursue a graduate degree she may still face barriers in admissions procedures. Structurally student admissions vary from the undergraduate to graduate degrees. For instance,

admissions are reviewed in a central office for undergraduates but are reviewed departmentally for graduate school. A study by the University of Michigan (1974) states that the diffusion of responsibility at the graduate level makes it difficult to monitor and control the possible infusion of discriminatory practices into admission decisions. Alder (1976) found that among women a more stringent self-selection process operates. A smaller percentage of women complete college and of those who do far fewer aspire to advanced degrees. Given the self-selection process women are likely to be more qualified than men and must maintain a superior average in order to complete the degree.

As in admissions, it is also difficult to assess discrimination in the awarding of financial aid. Since institutional support is also departmentally controlled, similar factors are in operation as mentioned above. A report from the University of Michigan (1974) cites several studies which indicate that a lower proportion of females receive teaching assistantships. The evidence on differential granting of fellowship aid is abundant but inconclusive. It does, however, point to a general pattern of selective bias.

Nies (1974) states that historically the image of a fellowship recipient has been male and that knowledge about some fellowships has been confined to an informal male network. For example, in 1973 out of 334 Guggenheim fellowships awarded only 24 went to women. In 1971-1972, out of 16 Congressional fellows only one was female. Also in 1971 out of 112 Fulbright-Hayes grants only 6 were given to women. Also fellowships serve a holdover function which operates beyond the year of receipt. Fellowships in themselves become qualifications. Therefore, if women are denied equal access to fellowships (e.g., Rhodes Scholarships, which women were prohibited from applying to until 1976 because of a will stipulation) they are also denied valuable qualifications.

Just as women are denied equal access to financial support, their psychological support network in most male-dominated fields is severely curtailed. It

was suggested earlier that women are required to enter graduate school with better preparations. However, given university and departmental structure, faculty perceptions and exclusionary tactics, most become demoralized and lose self confidence. Several studies have found that women leave graduate school because of a lack of support or encouragement (Harris, 1970; Feldman, 1974; Holmstrom and Holmstrom, 1974). Other studies have shown that women perceive the faculty as antagonistic and feel that they are not taken seriously (Alder, 1976; Sells, 1973, 1975). Harris (1970) gives examples of faculty comments to or about students (p. 285).

The admissions committee didn't do their job. There is not one good-looking girl in the entering class.

Women are intrinsically inferior.

You're so cute. I can't see you as a professor of anything.

Why don't you find a rich husband and give all this up?

Somehow I can never take women in the field seriously.

A female student is less likely to be taken under the wing of a professor because of her sexual status. Women can also never be sure of the true worth of their contributions because they will either be over compensated (patronized) or ignored due to their "inherent" incompetence. The professorial-student interaction is crucial to graduate student success in that professors are the primary judges of a student's professional worth. Women are thus forced to play additional professional games in order to attain the degree.

One way of strengthening women's self confidence while providing faculty support would be to increase female doctorates, thereby providing role models. Roby (1972) states that less than one-tenth of the faculty in American universities are women. Most of these female faculty members are concentrated on the lower rungs of the professorial ladder. Even in the "feminine" characterized

area of library science seventy out of seventy-four directors of the largest college and university libraries are men. Role models have been shown to have a definite affect on female achievement. Oltman (1974) cites a study by Tidball which found married women do attend graduate school, but mostly in the capacity of part-time students. In a University of Michigan (1974) report it is shown that financial aid eligibility is not open to part-time students. Harris (1970) cites an example in reference to a young widow with a five year old child seeking financial assistance: "You're very attractive. You'll get married again. We have to give fellowships to people who really need them" (p. 285).

Course scheduling is usually arranged around full-time students, with few considerations for part-time students. A further result of attending part-time is the extended length of graduate study, plus the secondary status the career must assume. Feldman (1974) points out that when students were asked about the possibility of spouse requesting they leave school, a greater proportion of women said they would. This appears to be a result of the societal expectation that females sacrifice for the good of the family.

Degrees Awarded

If a woman makes a decision to enroll in a graduate program and is accepted, she must then face emotional and financial strains. If she surmounts these obstacles and obtains the degree, she becomes one of an elite group of women who can easily be called "Superwomen". The proportions of these women in academic employment are small and the yearly increase is far short of an equitable goal of population parity.

Table 3 shows the total and proportion of bachelor's, master's and doctoral degrees awarded to women 1970-1971 through 1975-1976 by broad discipline division. The percentage of total degrees awarded was 44.4 percent bachelors; 42.9 percent master's and 18.6 percent doctorates. In comparison, Koontz (1973) cites data from 1969-1970 which shows that women earned 41.6 percent of the

bachelor degrees, 39.8 percent of the master's degrees and 13.3 percent of the doctoral degrees. We can observe from these data that degree production has only increased minimally and the attrition rate from master's to doctorate remain high. An examination of the data by fields indicates that women are still heavily concentrated in the historically "feminine" fields such as education, foreign languages, home economics and library science.

The historically "masculine" fields show a slow progression toward equity for women. For instance, women are still only 3.5 percent of the doctorates in agriculture and environmental design; 4.3 percent in business and management; 6.6 percent in computer and information services; 1.4 percent in engineering; 2.7 percent in law; 9.4 percent in mathematics; 7.1 percent in the physical sciences and 3.6 percent in theology. Even though these figures are slightly higher at the bachelors and master's level, women are consistently underrepresented in the most prestigious disciplines.

Being denied equal access to the prestigious disciplines has financial costs as a byproduct. Feldman (1974) points out that eight percent of all faculty in the United States earn \$20,000 or more. Women in all fields are less likely than men to earn \$20,000. In all of the fields stereotyped as "feminine" not one has eight percent of the incumbents earning \$20,000.

In short, the stereotyped "masculine" areas are the most prestigious and the most financially rewarding. As we have seen, women are at a distinct disadvantage from the very beginning of the academic and occupational process. From an initial poor self-concept before attempting to enroll in graduate school, on to facing selective and stringent admissions procedures, then channeled into fields considered commensurate with traditional female roles and given less than adequate psychological and financial support, the number of women who emerge with a doctorate (and many have fallen along the way) still cannot claim a total victory. Even though they now possess a degree and are "qualified", women proceed with the

same potential earning power and skills as do their male counterparts. They are trained for the "wrong" areas through subtle and not so subtle manipulations which are (hopefully) intended to appease women instead of equipping them to take their rightful place in the occupational world. All of these factors compose a vicious cycle which must be totally eradicated, instead of dissembled piecemeal.

Conclusions and Recommendations

Women in this country represent an untapped and underutilized resource. This becomes an especially critical problem when one considers the rate of our technological advancement. If women continue to concentrate in certain fields and continue to be systematically excluded from other, more prestigious and lucrative fields, their contributions to the future of this country will be severely limited.

In responding to this dilemma a proliferation of studies have appeared with numerous suggestions for correcting the present educational injustice toward women. Most authors offer suggestions which correct only one facet of the cycle. For example, a need for more counseling at lower educational levels and a better quality of counseling appears frequently (American Association of University Women, 1971; Sadler, 1972; Feldman, 1974; Oltman, 1974; University of Michigan Study, 1974). The need to increase female faculty and administrators is a common recommendation (American Association of University Women, 1971; Pifer, 1971; Koontz, 1972; Oltman, 1974). The need to furnish better accommodations for part-time students is suggested, especially in terms of child care, financial aid and class scheduling (American Association of University Women, 1971; Pifer, 1971; Sadler, 1972; Nies, 1974; Oltman, 1974; University of Michigan Study, 1974). Others suggest that financial aid (scholarships) requirements should be reevaluated and students should be educated about the application procedures (Nies, 1974; University of Michigan Study, 1974). Finally, many studies suggest structural change within the university system to allow for greater ac-

countability and total compliance (American Association of University Women, 1971; Pifer, 1971; H.E.W. study, 1972; Sadler, 1972; Feldman, 1974; Oltman, 1974; University of Michigan Study, 1974).

As stated earlier these recommendations address incomplete change. Change must begin with the basic socialization process of children and be continually reinforced throughout their educational careers. In order to adequately accomplish this goal, society must give total support to the idea of educational equality for women. Many will perceive these ideas of structural change as utopian. However, the previously proposed changes are directed toward partially increasing the self concept and options of women while imposing legal mandates on the university. These solutions only serve to get more women into the university, while neglecting the overriding problem of attrition due to societal pressures. Women must be admitted to universities in greater numbers and receive degrees in equal numbers in order to become a viable force in our country's growth.

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Table I Five Year Trends of Doctoral Production by Gender

Year	Male %	Female %
1920	472 (84.3)	88 (15.7)
1925	1004 (83.3)	202 (16.8)
1930	1758 (84.9)	313 (15.1)
1935	2152 (85.4)	369 (14.6)
1940	2848 (86.9)	428 (13.1)
1945	1288 (79.5)	333 (20.5)
1950	5898 (90.5)	621 (9.5)
1955	8023 (90.1)	881 (10.7)
1960	8690 (89.3)	1042 (10.8)
1965	14581 (89.2)	1759 (10.8)
1970	25509 (86.5)	3970 (13.5)
Over Total Degrees from 1920-1972	354,219 (87.5%)	50,510 (12.5%)

Taken from: National Academy of Sciences, "Summary Report 1972 Doctorate Recipients from United States Universities". National Research Council, Washington, D.C.: Office of Scientific Personnel.

Table 2

ENROLLMENT FOR MASTER'S AND DOCTOR'S DEGREES, SELECTED FIELDS, 1969, 1972 AND 1976

	1 9 6 9			1 9 7 2			1 9 7 6		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
All Fields	756,865	264,266	35	858,580	326,675	38	1,030,007	451,594	43.8
Agriculture	6,908	476	7	11,322	942	8	15,206	2,592	17.0
Architecture	1,948	240	12	7,240	1,466	20	10,128	2,774	27.4
Biological Sciences	34,861	9,367	27	38,914	10,784	28	43,957	14,281	32.5
Business & Commerce	76,372	3,798	5	36,213	2,795	8	149,976	27,854	18.6
Computer Science & Systems Analysis	6,201	684	11	8,826	1,164	13	11,852	2,180	18.4
Education	234,042	128,617	55	275,053	159,683	58	324,475	209,129	64.5
Engineering	65,048	796	1	56,006	1,219	2	57,330	2,868	5.0
Fine & Applied Arts	26,614	12,481	47	24,890	11,713	47	30,222	15,995	52.9
Foreign Languages	20,721	11,755	57	16,796	10,029	60	12,808	8,255	64.5
Health Professions	12,564	5,372	43	23,692	12,172	51	38,101	24,534	64.4
Law	2,521	102	4	2,870	259	9	3,586	551	15.4
English Language & Literature	34,569	18,932	55	30,162	17,245	57	43,982	24,032	54.8
Library Science	12,092	9,633	80	12,756	9,969	78	13,307	10,628	79.9
Mathematics	22,974	5,639	25	19,238	5,101	27	14,926	4,442	29.8
Physical Sciences	39,885	4,240	11	36,047	4,374	12	36,147	5,661	15.7
Psychology	22,726	7,827	34	29,157	11,189	38	35,363	16,686	47.2
Social Sciences	90,569	28,274	31	73,207	20,686	28	67,128	22,916	34.1
Theology	10,765	1,799	17	10,334	1,757	17	16,791	3,484	20.7

Source: Vetter, Betty M., E.L. Babco and J.E. McIntire
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Table 3

TOTAL AND PROPORTION OF BACHELOR'S, MASTER'S AND DOCTORAL DEGREES AWARDED
TO WOMEN 1970-71 THROUGH 1975-76 BY BROAD DISCIPLINE DIVISION

	DEGREES AWARDED 1970-71 - 1975-76								
	Bachelor's			Master's			Ph.D.'s		
	Total	Women	% W	Total	Women	% W	Total	Women	% W
Agric. & Nat. Res.	94,425	9,990	10.6	17,311	1,684	9.7	5,965	212	3.5
Architecture & Env. Design	44,257	6,720	15.2	14,860	2,659	17.9	364	42	11.5
Area Studies	17,754	9,555	53.8	6,245	2,534	40.6	984	244	24.8
Biological Sciences	272,348	86,440	31.7	37,899	11,954	31.5	21,157	4,102	19.4
Business & Management	782,654	105,138	13.4	200,221	13,979	7.0	5,594	239	4.3
Communications	95,086	36,621	38.5	15,026	5,716	38.0	939	184	19.6
Computer & Info. Sciences	25,555	4,286	16.8	12,856	1,622	12.6	1,146	76	6.6
Education	1,077,546	793,258	73.6	653,509	392,170	60.0	43,258	11,694	27.0
Engineering	298,148	4,904	1.6	97,128	2,048	2.1	20,042	286	1.4
Fine & Applied Arts	223,890	135,588	60.6	46,653	21,804	46.7	3,663	970	26.5
Foreign Languages	112,532	85,417	75.9	25,056	16,452	65.7	5,257	2,230	42.4
Health Professions	233,993	181,377	77.5	54,764	33,124	60.5	3,327	792	23.8
Home Economics	86,905	83,719	96.3	10,747	9,825	91.4	862	596	69.1
Law	2,983	314	10.5	6,803	528	7.8	221	6	2.7
Letters	393,002	231,783	58.9	73,182	42,183	57.6	15,342	4,689	30.1
Library Science	6,238	5,801	93.0	46,504	36,738	79.0	392	160	40.8
Mathematics	128,233	51,347	40.0	28,473	8,817	31.0	6,257	588	9.4
Military Science	2,932	4	0.1	-	-	-	-	-	-
Physical Sciences	126,987	20,804	16.4	36,333	5,137	14.1	23,202	1,648	7.1
Psychology	283,726	141,090	49.7	37,093	15,335	41.3	13,114	3,763	28.7
Public Affairs & Services	126,511	57,399	45.4	74,309	34,091	45.9	1,442	353	24.5
Social Sciences	890,906	328,520	36.9	101,422	29,501	29.1	24,463	4,287	17.5
Theology	25,760	7,023	27.3	17,661	4,092	27.7	4,092	146	3.6
Interdisciplinary Studies	137,785	52,418	38.0	17,255	7,669	44.4	1,177	283	24.0
All Disciplines	5,490,974	2,439,729	44.4	1,631,312	700,462	42.9	202,260	37,590	18.6

Source: Vetter, Betty M., E.L. Babco, and J.E. McIntire
1978 "Professional Women and Minorities: A Manpower Data
Resource Service", Washington, D.C.: Scientific
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